



July 27, 2006 Meeting Time: 7:00PM

I. **Call to Order and Roll Call:** Marty Portner called the meeting to order at 7:00PM.

II. **Pledge of Allegiance**

III. **JadEco Presentation –**

Jerry Sellers – Synopsis of Joe Rush's career and credentials. – Joe is the principal scientist for the Jadeco Lake and Natural Resources Consultation and Management. His formal education includes a BS in Zoology, with an emphasis in fish management and biological science and a Master's level of work in fisheries management. His experience includes working as a professional lake and natural resources manager for the past five years on the biggest private lake in Illinois on projects including the lake, the watershed fishery and wildlife. He also worked on a public education outreach for the IDNR as well as the National Future Fisherman Foundation. He has also become professionally involved with the Illinois Lake Management Association (ILMA) as a board of directors member for the past five years and held office there as Vice President and is currently President. He is currently co-chair for the educational committee for the Illinois Association of Lake Communities (IALC).

Fish Stocking/Shocking Program – at the July 13th RCD meeting, the board approved the fish stocking recommendation from Jadeco of 1000 7-9" Walleye, 88 Pure Muskie, and 880 Large-Mouth Bass at a cost of \$3,418. Another area that Joe is concerned with is the service of lake shocking, which used to be done by the DNR free of charge, however, due to budgetary cutbacks; they can no longer provide the service. The board may want to consider allotting money (about \$2,500) in the budget for that as it helps them to keep accurate records to know how many and what type of fish to stock in the lake.

Volunteer Lake Monitoring Program – One of Jadeco's goals was to help the property owners within the LNNLRCD become involved in the testing of the lake themselves to enable them to become more educated and thus accomplish more. State of Illinois has a VLMP Tier 3 program that does extensive water quality sampling. The volunteers take water samples from two sites on the lake and ship them off to the state, which then analyzes them free of charge and sends reports back. Normally a community would take several years to prove themselves before they could participate in a Tier 3 program, but Joe Rush contacted the state to let them know that they would get the work done. Sampling is from May through October, except for September, because they have found that results are ambiguous during that time due to turnovers in the lake. Parameters tested: transparency, total suspended solids, total phosphorous, nitrates, ammonia, chlorophyll 8 and nitrogen.

Equipment Purchases for Water Quality Testing – Joe recommends a purchase by the board of water quality testing equipment (about \$2,000) that would cover dissolved oxygen, temperature, pH, and conductivity. Joe brought a sample of the equipment for the board to look at – it is a mini-computer with a probe that a volunteer takes out on the water to record the results onto the computer to bring back to Joe to download the information onto a computer so that the results can be plotted out and graphed. He also recommends that they purchase a Global Positioning System (GPS) so that they know exactly where they are taking the samples to ensure consistency. Finally, he recommends the purchase of a buoy system to put at each test site. Consistency is very important so that they can gauge what is taking place throughout a season, over a long period of time so they know the trend of the lake. (Buoys & GPS cost up to \$1,000). As they make efforts to improve the lake, they will be

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able to evaluate the results. Joe showed a cost comparison of purchasing the equipment to do it themselves vs. hiring an outside firm to do the work. One quote from an outside firm was for \$4,038 vs. the one-time equipment cost of \$3,000. The other advantage of having the community volunteers performing the work is that they become more interested in the program when they actively participate in it. Joe recognized the following volunteers participating in the LMC and the VLMP program: LMC – John Mulholland, Joe Olliges, Jerry Pullman, Tim Spelde; VLMP – Ron Berger, Frank Durkin, Don Finn, Jim Proper, Jerry Sellers, & Gerry Skyles.

Fish Barrier System – for every acre of Lost Lake, there is 100 acres of watershed that drains into it, because of that, many of the fish that they are stocking are lost over the dam, especially during spring ice-melt and heavy rains. Two options: attaching it to the spillway chute or a net barrier system upstream of the spillway.

Pros and cons

	PROS	CONS
Net Structure Attached to Spillway	Low Maintenance Cleaning	More difficult to get approved
	Low Maintenance Design (Can use strips rather than netting so that leaves and twigs flow through)	Evaluation Necessary due to Overtopping concerns
	Material More Durable	Engineer Design Costs
	Long-Lasting	Higher Material Costs

	PROS	CONS
Net Barrier System Upstream of Spillway	Easier to get approved from State of Illinois	Material Not as Durable
	No Engineer Needed	Higher Maintenance Cleaning
	Small Initial Equipment Investment	Necessary to Move it during and after ice conditions to ensure no fish escapement in the spring
		More Labor Intensive

Goose Management – Some recommended ways to discourage the geese from coming onto the shore is number one, to plant a buffer strip of tall vegetation, second is to allow the lake to freeze in the winter so that the geese have no access to moving water, third, installing physical barriers or using repellents to discourage the geese, and fourth, adding the eggs so that they won't hatch and leaving them in the nest so that the geese don't lay another clutch of eggs.

Lake Shore Stabilization – Examples – riprap with fabric underneath (specific slope degree keeps rock from slipping down into the lake), concrete seawalls, steel sheeting, (seawalls and sheeting not recommended because they make the shoreline devoid of habitat for wildlife that could live there), and finally, natural vegetation (recommended because root system will hold the soil back, the tall vegetation will keep geese off of the shore and the root systems will absorb nutrients before they enter the lake, and the plants will provide fish habitat, and allows bugs to live there, which will in turn feed the fish). Joe presented two proposals from Vicki Webber to plant 64 plants along the shoreline 41'X7' long for \$1,100 or 136 plants along the shoreline 80'X5' long for \$2,100. The plantings, which would be a test site located on the shoreline at the lake court center, which is a common meeting area for the community, would include native grasses and flowers. Vicki guarantees her prices through the summer of 2006 and to use only non-invasive, native plants. She could either start in August or early next spring.

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Sediment Survey – A survey is necessary before developing a dredging plan so that they know how much sediment there is and where it is located. The RCD would learn the movement of the sediment within the lake, to be able to identify the problem spots of the lake in order to know where to centralize dredging efforts. It is also helpful in monitoring silt changes by creating a benchmark to compare later studies to.

Dredging – Methods: **Biological**: use of naturally occurring bacteria to decompose matter before it becomes silt in the lake; **Mechanical**: dig out the silt with onshore equipment; and **Hydraulic**: a floating barge with a vacuum system that stirs the sediment up and suck it up into a holding area, geotubes, or a truck to truck it out. If they spend the money upfront on a sediment survey, they will reduce costs by giving contractors a better idea of how much silt there is to remove.

Watershed Management – Joe showed a picture of the watershed of Lost Lake, which is 10,000 acres. For example, in the winter, when the ground doesn't absorb the water, 1 inch of rain would equal 100 inches coming into the lake. With that volume of water moving through the exposed creek shorelines leading to the lake that means a lot of soil being moved. Silt loading from the watershed is the main problem of Lost Lake; even though unstabilized shorelines within the lake are adding some silt, they are not adding nearly the amount of what is coming from upstream. The RCD needs to try to develop programs that reach outside of Lost Lake to help educate the people within our watershed, like the crop and cattle farmers. Although they may initially balk at helping with the cost of upstream management programs, if they can get a farmer to work with them in land management, they would only spend a little money up there and save a lot of money that would normally be spent on dredging the material. Dredging is a necessary evil, however, they could greatly reduce how often dredging is needed. Jerry has been keeping up relationships with the upstream owners in what the future holds and they may be looking into hosting a Lake Festival to educate the stakeholders next year (in which the RCD could obtain a \$500 grant). They need to develop those good working relationships with upstream landowners and government officials and they need to monitor the sediment load that comes into the lake from the farm fields during flood events. Joe showed pictures that he took of upstream land and the eroded shorelines that are falling into the streams leading directly into the lake. There are grant programs through the state that the RCD can apply for to help fund some of the projects.

Nature Conservancy: Good News- the Nature Conservancy now owns the land that is directly above Clear Creek and they have a 5-year plan to try to restore that area back to a native grasslands by getting the cattle off and planting natural grasses. On Babbling Brook, there is an aging infrastructure with the farmer there and they don't think they will have cattle on there in another five years. In the meantime, the Joe hopes that the RCD can develop relationships and fund stabilization efforts within the watershed, for example, by reducing the area that the cattle are allowed to enter the stream.

Board Questions: **Marty** stated that they have a great group of volunteers at this time, however, how large of a volunteer base would they need to replenish the volunteers each year and Joe said that a volunteer turnover would be a good thing because it would get more people involved. He feels that each time the volunteers go out, they should take someone out with them to recruit more volunteers, about five new volunteers a year, although there is the benefit of consistency with the same volunteer doing the testing. Joe stressed that the VLMP program is a state program that could be cut at some point in the future so they may have to address it some other way. Marty asked if the needs of the VLMP program will increase over time, stabilize, or decrease. Joe said that the need would initially increase if they purchase the testing equipment, although the equipment is not difficult to use, however, over time, the VLMP won't increase in need but they will probably want to improve on the water quality program itself.

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Dan asked whether the water testing equipment would take a whole new set of volunteers or if the existing volunteers would be performing the tests. Joe said that the same volunteers would be performing both the secchi readings and using the water testing equipment. Dan asked what the advantages would be of having the extra testing of the pH, dissolved oxygen, temperature, and conductivity. Joe said that it would give them a huge insight into their ecological system – that will tell them what is going on with the fishery; one change in the pH can result in a tenfold increase in the toxicity of existing chemicals to the aquatic ecosystem. So, understanding those parameters would be beneficial to understanding the whole ecosystem. Dan asked about the proposal from Vicki and Jerry explained that the 80'X5' section would cover the shoreline to the left of the dock and the 41'X7' plantings would cover the shoreline to the right of the dock.

Bill asked about the fishnets that would stop the fish from going over the spillway. Joe talked about putting the barrier right on top of the boards. Bill asked if they could put something up in front of the emergency spillway as well (which is activated every 5 years or so) and Joe said that he didn't think that the state would allow that to be blocked as well because it is the alternate route for water to go in the event of extreme flooding and they wouldn't allow that to be blocked. With regard to the net that is not attached to the dam, Joe said that he doesn't foresee a problem in getting that approved by the state, however, they would have to look at the situation carefully as it is labor intensive. Jerry said that the fishing club has been pushing for this for years and he thinks that there would be enough volunteers through the fishing club (of which there is currently 70 members).

Dan asked what the required frequency to dredge Lost Lake would be and Joe said it would depend on the silt loading – that hasn't been determined yet; Lost Lake currently has a major silt problem in the lake and *unofficially, Joe stated that they would probably have to dredge every 5-10 years*. If they could stabilize the shorelines upstream and maintain the incoming silt basins, then that timeline would spread out. Joe said that part of the plan would be to benchmark the entire lake to figure out where focus their dredging efforts.

Bill asked if Joe was concerned with silt loading other than at both the entrances. Joe said that although we cannot control what comes from upstream of the lake, we can control what comes from the lakes shorelines through shoreline stabilization – even though it is not the main source of silt coming into the lake. Shoreline property owners who fertilize their lawns are directly impacting the lake – that can be controlled. Joe has a brochure that can be distributed that teaches healthy home practices for your lake. Joe said yes, they are concerned with silt coming further into the lake because every time that silt is moved, it settles into the deeper water. If they can't afford to do the whole lake, then he recommends that they just do the inlets, however, as there has never been an evaluation of the whole lake, he feels that it is a good benchmark to push forward and know what the sedimentation is in the entire lake.

Marty asked if they would ever have to reevaluate the lake and Joe said that it is still coming in and so they will have to maintain it – Joe said that if they have a core group of volunteers that are active and get involved, he can train them to do some of the testing on their own that would replicate the studies. Marty asked if the initial survey would be a one-time thing or if they would have to do the same thing later (say five years from now) or just incremental studies later. Joe recommended that they do an entire lake survey now and the incremental studies later. Joe asked how many dredging programs they have performed and Bill said three total - one when they put a dragline out and drag lined the mud along the waters, second – a hydraulic dredging, and third, a mechanical dredging program. Jerry discussed in detail the three programs that took place. Joe figured that they have had approximately a program that involved dredging approximately every five years. Marty asked if there is any area more inland that is of the most concern and Joe said that he thinks that working on the sediment issue is the most important thing right now, although he's not leaving out the possibility of doing small projects to improve and beautify the lakes shorelines. Doing so would allow them to showcase their efforts and give the shareholders ideas on how to stabilize their shorelines and stream banks.

Jerry and Joe Rush have been working with the Natural Resource Conservation Service, the farmers

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immediately upstream, and the Nature Conservancy and are going to have a meeting with them to discuss what they will be doing in the next 5-10 years with regard to watershed planning.

Audience Questions: Frank Durkin discussed the positive effect that Nachusa Grasslands will have on our lake with regard to the rate of absorption of an acre of farmland to an acre of grassland. Nachusa is expanding within our watershed and with that expansion; our watershed will be greatly affected. The more natural grasses that grow, the better it is for our lake. Joe agreed with Frank and added that it is one of the best things to happen to the RCD.

An audience member stated that since there are no plants growing in the lake right now, why do they think that Vickie Webber's shoreline plants will grow. Joe said that the plants that Vicki would be putting in would mostly be terrestrial among the riprap to 1. stabilize the soil, 2. stop kids from throwing the riprap rocks in, 3. aesthetically pleasing, and 4 – goose control.

An audience member asked if the reason for there being no plant life in the lake was due to fertilizer leaching and Joe said that they are looking into that right now, for example checking atozine, however, Joe doesn't think that is the issue as much as the turbidity of the lake, which doesn't allow enough sunlight for the plants to grow.

An audience member asked what would be some ways of stabilizing the shoreline for our lake, and Joe said that he would most prefer the taller grasses and native plants for a buffer strip. His second choice for shoreline stabilization would be riprap and his lastly, seawalls.

An audience member asked for a list of recommended shoreline plantings and Joe said that he can give him a list of plants recommended by the Illinois Lake Management Association that the EPA also recommends. Vickie may be able to answer that question after the meeting as well.

Marty said that the items that Joe discussed that the board needs to vote on would be voted on at the August regular meeting next Thursday to allow Herb to participate in the decision.

- IV. Beaches – The DPH sent a notice indicating that the campground needed an emergency contact sign – Becky addressed that by laminating the signs and having Doug post them. The second item of concern from the DPH was the amount of goose droppings on the beaches. Becky will have to send a written description of what measures they have taken to address both situations. Dan said that the employees have been policing the beaches on a daily basis and in the last week they installed an owl at the North Beach and that is acting as an effective deterrent and so they are looking into purchasing some additional owls to place at the beaches. Marty asked about whether the owls would be easily pilfered and Jerry said that they are screwed in with 3-inch screws and they are mounted up high. Someone suggested that they periodically move the owls so that the geese don't get used to them. Becky will report back to the DPH that the owls have been effective in deterring the geese and that there is a daily policing of the beaches. The board discussed employees' need for a better scooping system for the beaches. Joe Rush suggested that they could call the Golf Course and find out what they use to clean their sand traps – something like an overgrown litter scoop.

Adjourn: Dan motioned to adjourn the meeting at 8:31PM. Bill seconded the motion. The board approved the motion unanimously. [07-27-06-01]

Next Scheduled Meeting: August 3, 2006

July 27, 2006 Motion List

1. Dan motioned to adjourn the meeting at 8:31PM. Bill seconded the motion. The board approved the motion unanimously. [07-27-06-01]